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SYCOSIS OF THE NASAL VESTIBULE

BY LEWIS S. SOMERS, M. D., PHILADELPHIA, PA.

The so-called non-parasitic sycosis or folliculitis, involving the hair sheath, may occur on any portion of the body where hair exists. As an infrequent condition it is seen involving the vibrissae of the nasal vestibule, and, although non-productive of any serious or permanent damage to the parts affected, is extremely annoying and painful to the patient. The disease in this locality is rarely seen by the rhinologist as the affection is generally considered too trivial and in the majority of cases is regarded as a "boil in the nose" not requiring treatment. In a few cases seen during the past year the affection was especially severe and attended with quite well marked constitutional symptoms.

The history of a typical case is as follows: The patient on blowing the nose will notice the vestibule on one side, usually the left, to be slightly painful to the touch, inspection showing no evidence of inflammation externally. If the interior of the nose is examined there will be seen a small patch of congestion, three or four millimetres in area, usually situated on the inferior portion of the external vestibular wall, where the vibrissae abound in the greatest number. In about twenty-four hours a papule will have formed in the centre of which projects a hair shaft, this papule may become still larger in size constituting a distinct tubercle, no evidence of pus yet being present. The pain in the local-

ity of the inflammation is quite severe, especially if the tip of the nose is subjected to the least pressure. In from 24 to 48 hours later, evidences of pus formation will be present, both objectively and subjectively, the former by the pointing of the tubercle, a small white or yellow area surmounting its tip and surrounding the hair shaft and the inflammatory signs such as redness, oedema and swelling involving the tip and side of the nose. The subjective symptoms are intense throbbing pain, which may be so severe as to cause the entire head and face to ache; a feeling of tension due to the pressure exerted by the inflammatory products, and finally, in a few cases, fever and malaise may be present out of all proportion to the small area affected. At this time the hair shaft may be extruded, with discharge of the purulent matter through the remaining orifice and a subsidence of the symptoms, both local and general, with a complete spontaneous cure; or, after the evacuation of pus a small ulcer may remain for several weeks. The ulcer is shallow, round in shape, and covered with a dry crust, which when removed allows a drop of pus to escape. Frequently the hair remains in situ and is then surrounded by the area of ulceration.

In a few cases seen the affection presented one of two forms, being either sub-acute, with acute exacerbations or chronic in character. The sub-acute form was characterized by the formation of papules and tubercles, resembling the so-called blind boil and continuing from four to eight weeks. At times the inflammatory action being barely apparent alternating with acute attacks, rarely going on to pus formation, the tubercle when punctured discharging turbid serum mixed with blood. The chronic type is probably due to repeated traumatism of this region of the nasal cavity, caused by removing dried secretions and so lacerating the dermal lining and producing repeated local infections by pus forming organisms. The duration of the affection extending over a considerable period of time, several weeks and even months elapsing be-

fore complete disappearance of the local changes. The chronic form resembles to some extent the sub-acute variety, but there is more infiltration of tissue and pus formation, the purulent matter discharging from several minute cavities, resembling to a great extent that caused by a septic wound with multiple foci of infection, but differing inasmuch as the area affected is very small of necessity, from the size of the part affected.

In nearly all cases the general health of the patient seems to be below par, this being especially marked in the chronic form. A concomitant nasal catarrh is usually present, the irritating secretions exoriating the vestibule, and in males the upper lip in a small number of cases, and by its irritating and macerating properties preparing the way for microbial infection by the pus producing organisms, thus forming the complete pathological complex. The disease is essentially a peri-folliculitis, originally simple inflammatory in origin, this having given rise to the erroneous title of sycosis non-parasitiae. Any of the pus producing organisms may become grafted upon the inflammatory process already set up, and we have the characteristic pustule surrounding the hair sheath. The organisms usually found are those normal to the skin as the *staphylococcus pyogenes aureus*, *staphylococcus pyogenes cereus* and *albus*. The disease is a pyogenic folliculitis, injuring the hair follicles and softening and destroying its sheath, the papillae of the hair usually escaping destruction, and after sufficient time a new vibrissae forms to replace the one destroed.

In this locality the affection occurs most often between the ages of 25 and 50 years. I have never seen a case under 20 years of age, but can see no reasons why it could not occur, although it should be remembered in this connection that the nasal vibrissae are not fully developed until after the period of puberty and frequently not until several years later. The diagnosis is readily made, the disease not resembling any other affection in this locality. Attention may here be called to the

eruption due to the local application of croton oil, being practically identical with sycosis if a minute quantity of the drug be applied to the vestibule. This factor can be readily eliminated by the history of the case. As before said the disease is non-productive of permanent damage, although in the chronic form there may be quite extensive infiltration of the tissues with inflammatory products, yet after appropriate local, and especially constitutional treatment, the parts will be restored to their normal condition. In two acute cases seen, there was quite extensive pus formation, causing intense swelling and oedema of the tip of the nose, and in one case the small abscess discharged externally between the sesmoid cartilages, yet recovery though prolonged was complete, leaving the organ in its normal condition. Although the disease is due in its pus producing stages to micro-organisms, it is not contagious, at least from a clinical point of view.

The treatment resolves itself into local and constitutional. The latter I believe to be most important, and if properly carried out giving a most satisfactory result. The general health of the patient must be looked after and suitable tonics directed, if the sycosis is the result of nasal catarrh, proper treatment directed

to the intra-nasal condition must be instituted. Strychnia in doses of 1-60 grain three times daily is very serviceable, especially if used in the form of the compound syrup of the hypophosphites. Attention to the diet and hygiene of the patient is of importance, the sycosis occasionally resulting from improper food, both as regards quantity and quality.

Locally, I prefer to wash the inflamed vestibule with a mild anti-septic, alkaline solution, such as Seiler's or Dobell's; this is used morning and evening, and after the parts are cleansed, an ointment containing two grains of the yellow oxide of mercury to the ounce of lanoline, is well rubbed over the entire vestibule, not only applying it to the part affected, but over as much of the nasal fossae on the inflamed side as can be reached by the patient's finger. This application is very grateful and sooting, and will alleviate the discomfort considerably. After pus has formed, extirpation of the affected hair sheath will allow the purulent matter to escape and give great relief, especially if the parts are then treated as previously directed. Sulfide of calcium in frequent doses may be used, but has proven of little value in my hands.



NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS,
THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELE-
MENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITU-
TIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

ON SOME OF THE CLINICAL AND
MORPHOLOGIC FEATURES OF
MIXED TUMORS.

The evolution of new growths is governed by no immutable laws.

For examples, many swellings may primarily present many features suggesting malignancy, the presence of pain, the tendency to infiltrate, early degeneration, hemorrhage and ulceration, and yet, with improvement of the general health and appropriate treatment, resolution succeeds, and the parts completely recover their normal state. Then, again, a simple papillary excrescence, adenomatous masses or simple ulcers, may give rise to evidence suggestive of malignant changes.

This is most often observed, in the lymphatic structures, in papillary proliferation within cavities, especially those of the rectum or bladder, and ulcers on any of the mucous surfaces. In the process of tubercular or syphilitic ulceration, it is often extremely difficult to distinguish it from the ravages of cancer.

In both we have essentially the same cardinal symptoms in the earlier stages, tumefaction, pain and tenderness, and, with later advances, about the same destructive march in both.

The state of the system nor the participation of the internal organs will be of little aid to us in many. In tuberculous ulceration we look for

the pyrexia of that condition, with complicating pulmonary symptoms; but these may be, but indistinctly manifest, if present at all. It is well to bear in mind, also, that the spread of and breaking down of epithelial invasion is always accompanied with an infection of the lesion, suppuration and systemic pyrexia from re-sorption of the pyogenic elements.

The same may be said of simple ulcerations, or those erosions and infiltrations of the mucous membranes, such as are consequent on trauma, best illustrated in lacerations of the uterine cervix, or infected lacerations, as abrasions in the ano-rectal region.

The degenerative changes of both tubercle and cancer present so many similar, clinical features, that many able pathologists and clinicians have maintained that something more than a casual relation exists between them.

Nevertheless, clinically, we must distinguish a very wide difference, inasmuch as one tubercle, though more common and destructive to life than cancer or sarcoma is, nevertheless, more responsive to remedies, as it very often is a malady which may undergo arrest or cure, while epithelial infiltration, especially when it seizes on organs, is, it should be candidly confessed, hopelessly beyond the reach of human aid. Operate we may, and often secure a tem-

porary relief for our unhappy patient, but genuine cancer will inevitably return and destroy.

This view is not in accord with the latest statistics, but statistics on this subject are a delusion.

In my own experience now, of more than twenty-two years, no single instance of cancer has come under my observation which the patient has survived two years. Epitheliomata are not included.

But it is of the highest importance for one to endeavor as far as possible to make a clinical diagnosis in this class of cases.

But we might allege that at present, with our great advances in microscopical research, this is unimportant, not that an early diagnosis is necessary, but that the clinical is immaterial.

This is another fallacy, or rather far-fetched statement. So many mistakes have come to my notice of well-known microscopists confounding benign with malignant growths, that I have come to the conclusion that the lens can, in no sense, be regarded as anything more than an aid in diagnosis of malignant disease. There is altogether too much disparity between its revelations and clinical evidence; too many simple lesions set down for malignant; too much "cutting early and cutting wide" for lesions which are of doubtful existence. They don't return after those mutilating dissections, it is true, for the reason, no doubt, that genuine cancer never existed.

Having spent nearly three years in a pathological laboratory, under the late eminent Carl Heitzman, of New York, the writer gives this expression of opinion advisedly, or something more than shallow, unsupported assumption.

In sarcomatous degeneration, or simple adenomatous proliferation, a study and analysis of the clinical features shed great light on the case. This embryonic type of tissue degeneration has been isolated and described first by Virchow.

The tumification of sarcoma is often distinguished with great difficulty, clinically, from simple inflammatory proliferation; nevertheless, this must be our main reliance, for, microscopically, the definite isolation of lymphoid corpuscles of inflammation, from the medullary elements of sarcoma, is often quite impossible.

It is, therefore, evident, that clinical medicine yet "holds the fort."

Inoculations, cultures, the segregation of stained bacteria, are important diagnostic aids, but without a systematic examination of one case, with observation of all the symptoms and its course are in themselves quite useless.

Coming back to "mixed" tumors, it may be stated that we will sometimes encounter masses which present many complex features, some suggestive of malignancy, and others which we interpret as benign.

These are more generally encountered in the uterus and the mammary gland.

At one time they are a source of severe pain, are tender on pressure and fixed, when, after a while, those symptoms yield for another period, when they recur either with augmented intensity or less severity. In others again they disappear after an interval altogether.

Here clinical medicine comes in again. It is all very well to declare that the practitioner must be educated into sending his cases of tumors early to the surgeon for operation, but he is conscious of the obligation he owes his patient, not to turn her over for the scalpels and for the removal of a tumor which may of itself disappear, which does sometimes occur in those of mixed type.

Evidence comes to us from every direction that benign neoplasms may undergo malignant changes, and on the contrary, we have no proof that malignancy of a mass may reach a certain limit and undergo arrest. The clinical history of various cases supports such a probability.

ON A NEW METHOD OF DISINFECTION OF LARGE ROOMS AND
WARDS WITH FORMALIN.*

BY HANS ARONSON, M. D.

(Translated from *Zeitschrift fur Hygiene und Infektionskrankheiten*,
Vol. XXV, June, 1897.)

In the beginning of the year 1892, Trillat | and I || independently made the first exact studies of the antiseptic properties of formaldehyde, and in the succeeding years many attempts were made to utilize the material for disinfection upon a large scale. The formaldehyde gas, to whose bactericide properties I called attention in my very first communication, was naturally the form in which it was sought to be employed. But, simple as the problem appeared, there were great practical difficulties in the way of its solution. The easiest way was apparently to develop the gas by means of heat from the commercial solutions of formalin. It was soon apparent, however, that this method was an impossible one.

As soon as the concentration of the solution exceeded forty per cent. a polymerizing of the formalin occurred, with a precipitation of solid paraformaldehyde. If the heating is continued, a solid, coherent mass forms in the bottom of the receptacle employed, which finally begins to burn. To avoid this difficulty it has recently been attempted to obtain the gas from a solution of formalin in methylated alcohol called holzin. This method, however, has several great disadvantages. The unavoidable spattering of the concentrated solution of formalin when heated

may cause unpleasant accidents to persons in its neighborhood; the vaporization of large quantities of methylated alcohol is not innocuous; polymerization of the formalin cannot be entirely avoided; and large quantities of the costly wood alcohol are wasted. Finally, it is not possible with this apparatus to develop large quantities of formaldehyde vapors in a short space of time; and this latter factor is of vital importance for a thorough disinfection.

In a second class of apparatus an attempt is made to develop the formaldehyde vapors by means of the oxidation of methyl alcohol itself. For this purpose a large number of lamps have been devised by Trillat, Bartels, Krell, Beuster, Schulze and others. Practical use of these lamps on a large scale has given unsatisfactory results (comp. Pfuhl*). This was to be expected when we remember that the oxidation of the methyl alcohol in these lamps is generally effected by means of glowing spirals of platinum wire, and the product of aldehyde, which alone is efficacious, forms necessarily only a small percentage of the methyl alcohol that is employed. By far the greater part of it is lost as carbonic oxide and carbonic acid gases. Apart from the cost, a large number of lamps are required to effectively disinfect even a small room, as Pfuhl has proved by practical experimentation! Nor does it seem proper that the formal-

*Paper read before the "Verein fur öffentliche Gesundheitspflege," Berlin, April 26, 1897.

| Comptes Rendus, T., CXIV, p. 1278.

|| Berliner klin. Wochenschrift, 1892, No. 30. The paper before the Berlin Medical Society was read before Trillat's communication appeared in the Comptes Rendus.

*Zeitschrift fur Hygiene und Infektionskrankheiten, 1896, Vol. XXII, p. 339.

! These remarks apply also to various American formaldehyde generators in which wood alcohol is used to produce vapors of formic aldehyde.

dehyde should be thus made at home on a small scale, not to speak of the danger from fire. Schepilewski was right when, in a recent communication, he doubted the possibility of disinfecting large areas by means of formalin in this manner.

Good results in disinfection upon a large scale were first obtained by Rous and Trillat,** by means of a pressure apparatus constructed by the latter. In this a formaldehyde solution is greatly superheated under a pressure of three atmospheres. The deposition of paraformaldehyde is prevented by the addition of calcic chloride. But the apparatus has many disadvantages from a practical point of view. Apart from its great cost (for all pressure apparatus must be very solidly and strongly constructed), I consider it quite improper to give such autoclaves into the hands of laymen; and it would certainly be in contravention of our police regulations.

A simple apparatus, which could be readily handled by the unskilled, and by means of which sufficient quantities of formalin gas can be quickly developed for the disinfection of rooms and houses, is therefore a desideratum. Such a one has been constructed by the chemical factory of E. Schering.* In view of the great importance of the subject, I have gladly undertaken the task of making a thorough bacteriological investigation of its action. The solid polymerized formalin or paraform (called also trioxymethylen) is used for the development of the formalin vapors. The antiseptic properties of this body, which I first described at the "Verein fur innere Medicin," March 12, 1894, depend upon the vapors which proceed from it at ordinary temperatures. At the same time I demonstrated, by means of numerous experiments upon man and animals, that the polymerized formaldehyde was an almost non-

poisonous body, and was well borne by children when given internally, even in large quantities. The use of this body as a formalin gas developer is very appropriate. It has been found more practical in many ways to use the polymerized formaldehyde compressed into the form of pastils, rather than as a powder. (Each such formalin pastil, which contains 100 per cent. of formaldehyde, weighs 1 gramme—15.4 grains.)

The action of the apparatus is as follows: The hot gases of combustion transform the paraformaldehyde into gaseous formaldehyde, and are afterwards thoroughly mixed with them. This mixture of the vapors of formaldehyde and of combustion enables the necessary quantity of moisture to be present to hinder a polymerization, and renders a thorough disinfection possible. In the stream of the gases of combustion a rapid distribution of the effective formaldehyde vapor into all portions of the space to be disinfected takes place.

The apparatus (comp. fig. page) consists of a cylindrical sheet-iron mantel a, beneath which is a spirit lamp b, with a suitable wick. In the upper part of the mantel a hangs a vessel r, destined to contain the formalin pastils. The upper end of the vessel r is provided with a number of slits, through which the gases formed by the combustion of the alcohol (carbonic acid and watery vapor) must escape. In their passage through this vessel there is a thorough mixture of these vapors of combustion with the formalin vapors generated by the heating of the formalin pastils.

The mode of using the apparatus is extremely simple and safe. The disinfecter is placed upon a sheet of tin on the floor of the room to be disinfected. In the apparatus that I employ from 100 to 150 pastils can be vaporized at once. For the production of greater quantities of formaldehyde vapor, several of these apparatus must be used together.

The lamp b is filled with ordinary alcohol (80 to 85 per cent.); about twice as many cubic centimetres of the fluid being employed as there are pastils to be vaporized in the vessel (i. e., 100 pastils require about 200

**Annales de l'Institut Pasteur, 1896, Vol. X, p. 283; comp. also Bosc., p. 298.

*Patents have been applied for on this method of disinfection.

¹ This paper has not yet been published in extenso. There are good abstracts of it in the Munchner med. Wochenschrift, 1894, p. 239, and the Berliner klin. Wochenschrift, 1894, p. 900.

ccm. (7 ounces) of alcohol). The wicks should project but little above the necks of the burners, lest the apparatus get too hot. The vessel r is to be filled with formalin pastils, and the disinfecter placed over the lighted spirit lamp. Windows, registers and other openings are to be carefully closed before the lamp is lit, and the key holes should be stuffed with paper. After the room is closed the apparatus may be allowed to burn itself out.

I have experimented with this apparatus under conditions as similar as possible to those met with in practice. I used a room about 100 cbm. (3500 cubic feet) in size, 7.7 m. (25 feet) long, 4.0 m. (13 feet) broad, and 3.3 m. (10 3-4 feet) high, in different portions of which the test objects were placed. I may mention at once that there was no difference in the result whether these test objects were placed on the floor of the room, suspended in its middle, or put near the ceiling. This demonstrates the even distribution of the formaldehyde vapors, due to the fact that its specific gravity is almost the same as that of the air.

For test objects I employed the staphylococcus, the streptococcus, the bacillus pyocyanus, typhoid and diphtheria bacilli, anthrax spores and tubercle bacilli. The test objects were prepared in various ways. Sterilized strips of gauze or wall-paper, or strips of linen or woolen stuff, were soaked in bouillon pure cultures of the first five varieties of bacteria, and were used moist or after drying in vacuum. Anthrax cultures containing spores were scraped from the agar tubes, floated in distilled water, and used for the impregnation of threads of silk or gauze. In one experiment they were spread in a thick layer upon strips of sterilized wall-paper. The tubercle bacilli were used in the form of thick surface cultures on bouillon, and also in the shape of tubercular sputum, which was thickly smeared upon strips of gauze.

In the first series of experiments two disinfectors, each provided with 100 pastils, were placed in the room, making about 2 grms. (30.8 grains) for each cubic metre (35 cubic feet).

After the test objects were placed in position, the two lamps were lit, the room closed, and only opened again after twenty-four hours. On first entering it the formaldehyde odor was so intense that I could only remain in it for a very short time, on account of the great irritation to the eyes and throat. But opening the windows quickly dispelled the odor. The pieces of cloth, etc., were taken up with sterilized forceps, inoculated into bouillon tubes, placed in the incubator, and observed for weeks. In every case portions of the same test objects that had not been exposed to the formalin vapors were inoculated upon similar tubes to control the experiments; and in every case they showed an abundant growth. In a large number of the trials the test objects were washed in a dilute ammonia solution after the disinfection, to remove any traces of formaldehyde, which might interfere with the growth of the culture. Similar non-disinfected test objects were treated with the same ammonia solution, and showed an undiminished vigor of growth.

The results of these numerous experiments, the minuter details of which are appended below, were that, with the exception of a few tubes, which were contaminated with other bacteria during the process of inoculation, there was no bacterial growth in any of the tubes. To test the absolute sterilization of the anthrax gauze and silk threads, portions of them were inserted under the skins of guinea-pigs. And while control animals, treated in precisely the same way with non-disinfected material, died after one and a half to three days, those treated with the disinfected material remained entirely healthy. The testing of the tubercle bacilli, both of the pure cultures and sputum, was done upon animals. Similar quantities of the untreated pure cultures and of those that had remained for twenty-four hours in the disinfected room were rubbed up in a sterilized vessel with six ccm. (1 2-3 drachms) of water, and injected into the abdominal cavity of guinea-pigs. The pieces of gauze with the sputum and dried were soaked in a similar manner in a few

cubic centimetres of water, and similarly injected. The control animals died in from four to five weeks with typical tuberculosis, while the guinea-pigs treated with the disinfected material remained healthy; and, when I killed them six weeks afterward, they showed no trace of tuberculosis.

The dust upon the floor of the room, and also that obtained by superficial scraping of its walls, proved to be entirely sterile after the twenty-four hours' disinfection.

A second series of experiments were made with one disinfecter and 100 pastils, being one pastil per cbm. (35 cubic feet). All the non-spore containing material, staphylococci, streptococci, pyocyaneus, typhoid and diphtheria bacilli were killed after twenty-four hours' sterilization. But the anthrax spores were not in every case destroyed. Some of the strips of gauze and silk threads proved sterile; but others developed a culture. For practical purposes, however, this number of pastils would be entirely sufficient.

I further made a series of experiments regarding the penetrating power of the formaldehyde vapors. In accord with the earlier results of Vaillard and Lemoine,* I found that it was not very marked. Test objects wrapped in several layers of filter paper or thin muslin were, however, disinfected. Infectious material placed in the midst of the feather stuffing of a pillow was not satisfactorily reached by the formalin vapors.

*Annales de l'Institut Pasteur, 1896,
Vol. X, p. 481.

Steam would certainly be preferable for beds, mattresses and other similar articles. Disinfection with formalin vapor is, however, very suitable for clothes, rugs, hangings, etc., that are hung up in the room. This I proved by a number of experiments. It is important in such cases that all the surfaces are exposed as freely as possible to the air. If a test object, such as the strips of gauze impregnated with staphylococci or pyocyaneus, is put deep in the pocket of a coat, and compressed, disinfection (at least with 2 gm.—30.8 grains) of the polymerized formalin to the cubic metre (35 cubic feet) does not take place with certainty.

One very favorable feature of the disinfectant process with formaldehyde gas is the fact that clothing and furniture are in no way attacked by it.

Of very great importance also is the non-poisonousness of the gas. In many of my experiments I allowed guinea-pigs and rabbits to remain in the room while disinfection was going on, and I found the animals perfectly well the next day. On killing the animals, there was not even, as might have been expected, irritative or inflammatory appearances in the bronchi.

It is a remarkable fact, and one to which I called attention in my very first publication, that formaldehyde, so excessively poisonous to the schizomycetes, is relatively innocuous to the higher organisms. Even the hyphomycetes flourish in a nutrient medium containing an amount of formaldehyde that renders all bacterial development impossible.



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SCHERING'S DISINFECTANT AND DEODORIZING LAMP.

Formalin has been known for years as the most efficacious and penetrating of disinfectants. The Schering Chemical Works, in Berlin, Germany, have solved the problem of its employment in gaseous form with perfect safety, by means of two simple and therefore inexpensive instruments.

The formalin is not employed, as was heretofore the case, in fluid form, but as pastils (paraform). It is a perfectly indifferent and insoluble body, and can therefore be freely used by any one. These formalin pastils are vaporized in the apparatus by a new process of our own discovery, and the formalin is given off in its gaseous and most active form.

The chief properties of formalin may be summarized as follows:

1. Formalin is admittedly the most energetic disinfectant that we know of. (It destroys all pathogenic organisms, even the most resistant, as the anthrax spores.)

2. Formalin in gaseous form is entirely innocuous, in spite of its penetrating odor. One of its most remarkable properties is its virulent action upon bacteria; but in the gaseous form it has no deleterious action at all upon the higher organisms. Even the continuous inhalation of large amounts of formalin is not in any way injurious to health. The lamp and disinfecter, however, are so arranged that no formalin odor can penetrate the rooms adjacent to the one that is being disinfected.

3. Formalin is the best deodorizer that we possess. Even small quantities remove foul odors, uniting with the bodies that cause them to form odorless compounds. The odors, therefore, are not merely covered up, but are completely destroyed.

4. Formalin is our best preservative medium, being efficacious in that respect, even when present only in very small amount.

ADVANTAGES OF THE SCHERING METHOD OF DISINFECTION.

1. The gaseous formalin penetrates everywhere, into all the corners and

crannies, and kills all the disease germs that may be present in the room.

2. The apparatus are so constructed that a spontaneous and even distribution of the gaseous formalin necessarily takes place; this being an essential condition for a really efficacious disinfection. It is obtained by a peculiar admixture of the formalin vapor with the gases of combustion derived from the alcohol that heats the apparatus. They have the further advantage that the formalin is used in them in concentrated form, as pastils containing 100 per cent. of pure formaldehyde. Thus a pastil weighing one gramme (15.4 grains) develops one gramme (15.4 grains) of pure formaldehyde gas, and therefore equals 2 1-2 grammes (38 1-2 grains) of the 40 per cent. fluid formalin. One gramme of pure formaldehyde gas as obtained by heating one pastil occupies a space of 745 ccm. (260 cubic feet.)

3. Schering's apparatus are not cumbersome, can be taken anywhere, even when traveling, and can readily be used by any one.

4. The Schering method of disinfection is incomparably more efficacious, simple and cheap than all previous ones. No troublesome preparations are required, and the process may be started at any moment. It compares very favorably with the complexity of other methods, and the lengthy and troublesome preparations that they require.

5. The Schering method of disinfection possesses one important and, indeed, inestimable advantage over all others—it does not injure fabrics or material of any kind. Furniture, carpets, hangings, metallic articles, colors, etc., are in no way attacked. Rooms to be disinfected need not be cleared of their furniture and ornaments.

The older methods of disinfection are feared by the public because, in addition to their other disagreeable features, they often entirely ruin valuable objects. Even at the expense of health, such processes are usually avoided. This is entirely obviated by the Schering method.

According to Dr. A. B. Griffiths, of London, the vaporization of from

40 to 50 pastils, in a medium-sized room that is tightly closed, suffices to destroy the germs of the commoner infective diseases, such as the organisms of diphtheria, typhoid fever and tuberculosis. In these as well as in other diseases, such as scarlatina, influenza, etc., which are probably of a similar infectious origin, the disinfectant lamp is invaluable as a means of preventing the spread of contagion. For the same reason, it is of the greatest value when traveling at watering places. If it seems necessary to undertake a thorough disinfection, in order to destroy spores more resistant than these, two lamps may be used; or, better, the formalin disinfecter, which is also inexpensive, can be employed.

The disinfectant lamp renders excellent service where it becomes necessary to thoroughly remove evil, foul and decomposing odors from a room. Rooms containing food that is prone to decompose, as meat, game, milk, etc., are given a preservative influence extending from one to several days at the same time that they are deodorized.

The formalin disinfecter is constructed upon the same principle as the disinfectant and deodorizing lamp, and, though larger, is, like it, convenient, cheap and easy to use.

Schering's formalin disinfecter is specially designed for disinfection on a large scale, for the complete disinfection and sterilization of large rooms, entire dwellings and their contents; as also for the thorough disinfection of single rooms in cases where it is desirable to destroy the more resistant spores. In consequence of its larger reservoir for the formalin disinfectant pastils, and the greater heat that is developed the room is so rapidly filled with the formalin vapors that the most resistant bacilli and spores are inevitably destroyed. A complete surface sterilization takes place, and we have every assurance that all the pathogenic organisms are destroyed. This has been most thoroughly proven by varied and repeated experiments on a large scale.

Not only are the diphtheria typhoid, and tubercle bacilli, streptococci, staphylococci, etc.,

killed, but the most resistant forms, as the anthrax spores, are entirely destroyed. These latter, as is well known, are among the most resistant of all the micro-organisms, and their destruction has been selected by Professor Koch as the criterion of the efficacy of a disinfectant. In every trial that was made with the above-mentioned bacteria and spores, which were exposed in the room to be disinfected, either smeared upon pieces of wall paper or impregnated upon linen rags, they were entirely destroyed by the process. Even thick layers of pure cultures of the tubercle bacilli were sterilized through and through.

To effect a thorough and deep-reaching disinfection of a medium-sized room, say of 80 cbm. (3000 cubic feet), about 9 m. (30 feet) long, 3 m. (10 feet) wide, and 3 m. (10 feet) high, the vaporization of 100 to 150 formalin pastils is required. This is about one to two formalin pastils to each cbm. (35 cubic feet). For the disinfection of very large rooms, two disinfectors should be used.

In addition to its great simplicity and its absolute certainty, this method of disinfection possesses the advantage that it in no way injures the contents of the room to which it is applied. After repeated and thorough disinfection of reception and living rooms, with all their contents undisturbed—furniture, carpets, hangings, oil paintings, metallic articles—not the slightest change was observed. The colors were perfectly preserved.

1. For Disinfection.

DIRECTIONS FOR THE USE OF SCHERING'S FORMALIN DISINFECTANT AND DEODORIZING LAMP.

The lamp should be placed upon a table or on the floor in the middle of the room, the doors, windows and other openings being closed. The keyholes should be sealed by stuffing them with paper or cotton. Closets must be opened wide, and all clothing, bedding, etc., must be spread out; or, better still, hung up.

The cup (e) should be removed, as it is used only for deodorization and inhalation, then the glass chimney

(a) with the globular container (r) is taken off from the lamp (b) and the container (r) filled with a number of



Schering's formalin pastils. For the destruction of the less resistant disease organisms, such as the bacilli of diphtheria, typhoid fever and tuberculosis, forty 1-gramme (15.4 grains) pastils, the contents of two of the small boxes, will suffice in a medium-sized room, 3 m. (10 feet) high, 3 m. (10 feet) broad and 8 m. (26 feet) long. Then the reservoir of the lamp (b) is about half filled with alcohol after unscrewing the burner; the wick is lighted, and so regulated that it projects about 2-3 mm. (1-12 to 1-8 inch) above the tu. If wood alcohol is used as a fuel the wick should be about even with the tube (burner), as a too large flame will produce more heat than is required. More than two ounces wood alcohol should not be placed in the reservoir, which holds four ounces. The chimney (a), with the filled container (r), is then replaced upon the lamp. No one should remain in the room, and the doors should be tightly closed, since the large amount of formalin vapor that is developed is very penetrating, and may be unpleasant in that it causes lachrymation in the occupants of adjoining rooms. Nevertheless it is expressly to be remarked that the inhalation of formalin vapors is in no way injurious to health.

The apparatus once started, it may be left entirely to itself. The light need not be extinguished, since the lamp burns out with perfect safety. According to the flame, two ounces of alcohol or wood alcohol will burn from four to eight hours. After 12 to 24 hours the room should be aired, and the formalin vapors

will quickly disappear. If the room is to be thoroughly disinfected, and the most resistant spores killed—a procedure that is not necessary under ordinary circumstances—two lamps should be employed, or the formalin disinfecter can be used.

For deodorizing purposes the cup (e) is employed; it fits into the globular container (r), and is designed to permit a slower volatilization of the pastils.

The cup (e) is filled with one or more pastils, the chimney (a) with parts (e) and (r) is removed, and after unscrewing the burner the reservoir of the lamp (b) is half filled with alcohol or wood alcohol. The wick is then lighted, and the flame turned down as low as possible, so that very little heat is received by parts (e) and (r), and the vaporization of the formalin pastils proceeds as slowly as possible. The wick should then be 2-3 mm. (1-12 to 1-8 inch) below the neck. Then the chimney (a) with parts (e) and (r) is replaced. The production of the disinfectant vapor is so slow that it can hardly be perceived by the smell; yet it completely removes all foul odors, and thoroughly purifies the air of the room.

The room may be used during deodorization, since the very small amount of formalin odor causes no trouble at all. The flame may be kept so small that the vaporization of a single formalin pastil will take three or four hours. If the room can remain unoccupied the size of the flame can be increased, and the vaporization and deodorization can be effected in a shorter time. The same may be done in the preservation of food in small rooms; for larger rooms see under I.

Note.—When the wick has become too short after repeated use of the lamp a new one, as closely woven as possible, should be employed. It is desirable to remove the small amount of ashes that remains in the holder (r) after each disinfection.

**DIRECTIONS FOR THE USE OF
SCHERING'S FORMALIN
DISINFECTOR.**

The disinfecter should be placed upon a sheet of tin or upon a tray,

and set upon an uncovered table or other firm support in the centre of the room that is to be disinfected. Windows, registers and all other openings must be carefully closed. All cupboards and closets should be opened, and all articles of clothing, bed linen, etc., should be spread out; or, better still, hung up. The key-holes should be stuffed with paper or rags.



The container (r) of the disinfecter is now filled with a greater or less number of formalin pastils, in accordance with the necessities of the case. For the disinfection of a medium-sized room, 30 feet long, 10 feet wide, 10 feet high; or, say, 3000 cubic feet, about 100 pastils, or the contents of one package of five boxes are required. The reservoir of the lamp (b) is then filled three-quarters full of alcohol, or if wood alcohol is used it should be only about half filled, and the filler cap is screwed on again. The wicks should be even with the level of the tubes, or at all events should not project more than one mm. (1-24 inch) above them, so that the flames should not be too high and the apparatus not get too hot. For the complete disinfection of larger rooms two disinfectors should be employed.

After all the wicks are lighted the room should be left and the door tightly closed. If the formalin vapor, which is absolutely innocuous, both to men and animals, becomes perceptible in the neighboring rooms, their windows should be opened.

After 12 to 24 hours the windows of the disinfected room should be left open for some time, and the formalin odor will entirely disappear. The vaporization of the for-

mali pastils effects a complete sterilization of the room, killing all, even the most resistant, disease germs;

so that the room can be used again for dwelling purposes with perfect confidence.

WELL DONE, BRITON!

It is a source of profound gratification to us to learn that there yet remains some slight leaven of manliness and decency in the medical profession, and that the British Medical Association has lately fearlessly asserted it, in throwing, neck and heels, out of that distinguished organization the unprincipled renegade members, who, in defiance of the united profession of Australia, went out there from England to fill the places of the highly honored practitioners who were summarily removed from their hospital service because, forsooth, they refused to be bossed about by a nurse. We append from the *Lancet*, of August 10, 1897, note on the subject:

"Two very different incidents in the proceedings deserve a word of notice. The presentation of the gold medals will be generally approved. If an association does not emphasize such services as those of Mr. Wheelhouse and Sir Walter Foster there must be something wrong in it. The award of the Stewart prize to Dr. G. Sims Woodhead and of the Middlemore prize to Dr. Alexander

Hill Griffith will be equally approved. The other incident was of a painful character—the expulsion of two practitioners from the membership of the association for having accepted offices under the Government of South Australia, in the General Hospital of Adelaide, vacated by the whole staff as a protest against the conduct of the government. The members so removed had ample opportunities of defending themselves. We cannot wonder at the all but unanimity with which the association acted in this matter. The profession must protect itself, and it would be simply lamentable if a great voluntary association were to be stricken with the same paralysis of discipline which seems to threaten the chartered and statutory authorities."

Now, what is New York doing about the rapacious grab of '95, in which the places of twenty-eight reputable members of hospital staffs were seized on by practitioners in that city in defiance of the united protests of the American profession?

PROFESSIONAL ANIMOSITY.

The controversy that is agitating the columns of the *Journal of the American Medical Association*, between Drs. Upshur and Woodbridge, proves beyond a doubt that the spirit of brotherly affection which forms such a characteristic portion of the physician's professional life, is, to put it mildly, very latent.

Acerimonious discussion and ungentlemanly insinuations should not enter into scientific investigation. Personalities engendered in a spirit of malice have never yet won a cause.

And as educated, enlightened medical men, seeking the truth in order that we may use it for the benefit of suffering humanity, we should be far removed from the petty spites and trivialities which characterize the discussions and debates of illiterate men.

If Dr. Woodbridge has invented or discovered a method for the successful treatment of typhoid fever, then all honor to him, and the whole profession should rejoice in his success, for it means more than a victory for

him alone: it means the saving of thousands of useful, nay, valuable, lives, at the very time of life when such lives are apt to be of the greatest value.

The majority of the cases of typhoid fever occur between 18 and 35, just when the fullest fruition of life appears before ambitious youth.

But if, on the other hand, his system of treatment has been used with ill success by numerous other observers, careful, honest, conscientious men, whose sole object in life is the preservation of health, the prevention of disease and the support of professional honor, then there has been an error of judgment on Dr. Woodbridge's part in considering every successful case he has treated, of fever, to be one of typhoid.

Herein lies another difficulty: Environment, condition of life, constitutional peculiarities, all these, too, have to be considered in determining our prognosis of this or any other disease. The manifestations of typhoid are not always the same, nor

does the length of the disease cover the same period in every individual, so that frequently what we attribute to the efficacy of our treatment, is more apt to be due to some systemic peculiarities limiting the encroachment of the disease.

It is this variety in the make-up of the individual that prevents us from reducing the principles of medicine to the accurate basis of scientific data.

The time for establishing an exact science of medicine has not as yet arrived, nor will not until we attain an exact science of man.

It is then the individual and not the disease that confronts us, and though there may be certain broad outlines in every disease which demand attention, back of the disease is the individual.

Our treatment of typhoid, or pneumonia, or numerous other diseases, must mainly, then, be symptomatic and be more of a reconstructive than of a destructive character.

We are in receipt of a most excellent illustrated catalogue of electrical appliances from the McIntosh

Battery and Optical Company, of Chicago, which would pay our readers to obtain.

VIRGINIA HOT SPRINGS—ON CHESAPEAKE & OHIO RY.

The Chesapeake & Ohio is in the advanced class of railroads. Its service and system are most adequate and both are maintained in the most exacting manner. From a point of safety it is nearly absolute; for luxury and enjoyment it has no rival. It brings the Hot Springs of Virginia within a night's ride of New York, Philadelphia, Cincinnati or Louisville and eight hours from Washington.

Those who have been charmed with the beauties of the Hot Springs Valley in the summer and fall months, will be no less delighted with the sublimity of its environments and its delightfully rare atmosphere during the winter and early spring. While a great deal of interest at

Hot Springs centres in its bathhouse, which has no equal in America, and in the flowing springs of natural hot water, the curative qualities of which are phenomenal, the high class of its patronage renders the place attractive to those who do not visit it simply as a sanitarium. The New Homestead, unquestionably the finest hotel in the mountain regions, is admirably well adapted to all seasons. Few hotels are better fitted to supply every want and gratify every taste.

Riding, driving, cycling and golf which are features of the place, add greatly to the enjoyment of the guest. Indeed it is seldom that the opportunity to combine treatment by thermal waters with pleasure and exercise exists as it does at this ideal resort in the mountains of Virginia.



ARE X RAYS PRACTICAL?

Shortly before sailing upon my vacation this summer my attention was called to what seemed a rather unwarranted statement in a medical journal representing a large medical association to the effect that X-ray photography is beyond the reach of the average practitioner, and is either surrounded by difficulties or "has no success in the long run."

The writer of the criticism will himself, no doubt, welcome a correction of his erroneous views, and by others who may have read his discouraging remarks the true facts will be appreciated.

The following quotation cites the leading points to which I shall refer:

"The fact remains the same that the authentic photography, while frequently individually successful, has no success in the long run, but most persons who have used it have come to the conclusion that it permits many mistakes and much chagrin for people's benefit by employing a professional photographer to do the work, and in our large cities that is now entirely practical, but before it becomes generally used, the price must be reduced, as it is effectually necessary to make the exposure on three sides in order to obtain a correct notion of the exact nature of the case. * * * * All this is expensive at present rates, but it will doubtless be reduced in time."

The above is not quite plainly expressed, but leads us to infer that the common experience with X rays is disappointing. The fact is that the writer of the above criticism has simply not informed himself in regard to approved methods and learned how easily almost every physician can avail himself of this practical aid to certain forms of diagnosis, an aid absolutely unapproachable in the detection of many conditions beyond the reach of any other method of examination. In ignoring the fluoroscope and assuming that photography affords the sole use of X rays the critic I have quoted leaves us in doubt as to his competency to speak on the subject, for an examination of a fracture can be made from all directions with a good tube and fluoroscope while a single plate was prepared for exposure. To the practiced eye the examination is quick and fairly accurate, while photography is reserved for special cases in which a permanent record is desired. By far the greater part of office X-ray work is now done with the improved fluoroscope—a fact which the critic fails to mention.

Another very important point is the simplicity of the whole thing. Any physician who has a good coil or a good static machine can be taught how to do first-class X-ray work in from two to four hours, no matter if

he has spent many weeks and considerable money in the vain attempt to acquire experience alone. The directions given in my manual of static electricity in X-ray and therapeutic uses are very clear and will assist all who read them, but a brief object-lesson will teach more than written words.

After the publication of my articles on "Crookes' Tubes and Static Machines" and "A Study of Maximum X-Ray Effects," I received numerous letters, both from the various States of this country and from Europe, remarking that the results I reported were "marvelous," and desiring directions for producing them. I do not wish to have any results reported by me regarded as "marvelous," for they are simply what all others can procure who employ the same tubes and methods. Notwithstanding statements to the effect that very few are able to do fine X-ray work, I repeat my frequent declaration that all who possess apparatus can be taught quickly and easily how to use it with satisfaction, for it is a very simple matter. My book was written to instruct those who need it, and as it describes actual work and not untried theory, it is not an argument "to sustain his side of the question," as a critic states, but is a demonstration in practical technique.

With this book in hand, the average physician can guide himself to success, or if he is able to visit New York he can save time and friction by taking a single object lesson of a couple of hours only. I will take this opportunity to reply to correspondents whose letters have accumulated during my absence abroad, and who ask for information regarding instruction in X-ray work.

The chief secret of success is the art of manipulating the vacuum state of a given tube. In a single session of about two or three hours, I instruct the physician how to select a proper tube, to choose a good tube and discard all poor ones, to make such tests at once make plain the exact quality, condition and capacity

of the selected tube, and determine the best method of operating it. I teach the physician how to interpret the appearances in the tube so far as they indicate its efficiency, to develop the fullest capacity of any tube that will work at all, and to properly appreciate and forever after understand what a high-efficiency tube can be made to do. In every case I prepare the student to do all that I can do myself, and he can return home and repeat the same results in his own office. To those who have read of striking results and desire, but fail, to equal them, there is no way so simple as to devote part of an afternoon to being shown how. During the past season the number who became interested in X rays, but disappointed themselves in attempting to work a tube unaided, was, no doubt, large, but when it is known how easily expert skill can be obtained, the majority of active practitioners will employ the fluoroscope, even if they rarely take a negative. It is well that so indispensable an instrument as the Crookes' tube has proved itself to be is not out of reach of the general profession. Nearly all can be quickly instructed how to produce its best effects and how to use the best fluoroscope. With the improvement in tubes there is now little breakage, and at a small expense the physician who already possesses the electrical current can equip himself to equal the best X-ray work now done anywhere.

In closing these remarks it may be well to say that there is absolutely no cause for any hesitation to employ X rays on account of alleged or actual injuries caused in the past. Alarm on that account is as preposterous as would be a refusal to prescribe calomel because bichloride of mercury in pound quantities is a poison. The proper use of X rays will never cause any trouble. This is as certain as that any tool ever made by man can be abused. Even abuse of X-rays is difficult, for they are very safe and harmless things.



FATAL POLYNEURITIS.

Brauer (*Berl. klin. Woch.*) discusses a case occurring in a syphilitic patient treated with mercur. A man, aged 24, acquired syphilis in the beginning of August, 1895, and was treated with a five weeks' course of mercurial injections shortly afterward. At first three grammes, and later five grammes, were used daily. There was no stomatitis or salivation. Toward the end of the five weeks he experienced a feeling of numbness in the fingers, and the arms became weak, but the legs were unaffected. The mercury was at once stopped, but as he was going home he experienced some unsteadiness in his gait. On the second day the legs became weak, and on the third day there was some unsteadiness in his speech. Deflution was also difficult. He steadily became worse, and on October 9 secondary syphilitic affection appeared. For this he was treated with injections of salicylate of mercury. The syphilide disappeared, but the nervous symptoms became aggravated. When admitted into the medical wards there was a well-marked paresis of both arms and legs. No muscles were completely paralyzed. The movements were ataxic. There was impairment of sensation, but no pains. The patellar reflexes disappeared. Coarse fibrillary twitchings were present in the affected muscles. There was a partial reaction of degeneration. The sphincters were easily disturbed, and there was moderate constipation. Suffocative attacks supervened, and the diaphragm was found paralyzed

on January 19. Death resulted from pneumonia.

Marked pathological changes were found in the nerves, consisting of degeneration in the medullary sheath, and a slight proliferation in the interstitial tissue. The axis cylinders were slightly swollen in places. There was no disease in the nerve roots and no pathological changes in the minute arteries. The brain and spinal cord were intact. The muscles only showed slight morbid changes. There was no other possible cause of the neuritis than recent syphilis and mercurial intoxication. In syphilis the nervous system may be involved, either by the specific syphilitic lesion, or by changes caused by toxins in the blood. A true syphilitic infection could be excluded with certainty. The slight changes in the interstitial tissue in the nerves were in all probability due to the degeneration in the parenchymatous elements. Syphilitic neuritis does not occur in so widespread and symmetrical a form. Finally, syphilitic nervous affections rarely supervene at a time when syphilitic manifestations are disappearing under anti-syphilitic treatment.

Kuss (*These de Paris*, 1897), maintains that among the various causes of true asthmatic dyspnoea, the principal is a defective evaporation caused by a want of sufficient fluid in the epithelial cells of the pulmonary vesicles. This insufficiency of fluid must be attributed to the reflex affection, from various causes, of the vaso-mo-

tor nerves governing the nutrition of the cells, and produces the same effect as a sudden and considerable reduction in area of the pulmonary surface. The convulsive action of the respiratory muscles might easily be a consequence of this dyspneic condition. In the treatment of asthma (1) increased activity must be given to the secretory powers of the epithelial cells by acting on the secretory (vasomotor) nerves; (2) the determining cause of the harmful reflexes must be obviated by various recognizable methods; (3) the physiological and anatomical soundness of the alveolar walls should be maintained by proper nutrition.

MILKY - WHITE NON - CHYLOUS ASCITES.

Apert (*Bull. de la Soc. Anat.*, Paris, 1897; p. 187), gives an account of a case in which the ascitic fluid exactly resembled chylous ascites to the naked eye, but microscopically did not contain fat globules, and chemically a very small quantity of fat was found. The specific gravity was high, and the quantity of albumen large. Cultures made from the fluid remained sterile, and it was not altered by filtration. No clotting or separation into distinct layers took place on standing. Such cases are rare; previous recorded cases are those of Lion, Achard and Sainton.

SALICYLATES IN RHEUMATISM.

The salicylic acid must be obtained from the vegetable kingdom; it must be given without an alkali or a base; from forty to eighty grains should be given daily for ten days; the patient's diet should consist of milk and farinaceous food for at least a week; the bowels should be freely opened daily.

—Latham.

TREATMENT OF CARDIAC DISEASE.

In strychnine we have an ideal cardiac stimulant, which not only acts upon the circulation, but as well upon respiration, digestion and assimilation. It is especially indi-

cated in the weak heart of pneumonia and febrile processes, given hypodermically in one-thirtieth to one-tenth grain doses, repeated until some sign of the drug is manifested. It is also useful to relieve the alarming symptoms which occur in surgical anesthesia, in the cardiac weakness often associated with neurasthenia, and in that due to depressed nerve-force. Strophanthus is of great value as a cardiac sedative in that form of tachycardia so common in exophthalmic goitre. These two drugs will retain their supremacy because of their influence over the vital centres in the medulla, to which the various systems of the body look for support and encouragement.

—Krauss.

STRANGULATED HERNIA.

After several days of futile efforts at reduction the patient was placed upon the back with the hips raised and the legs flexed. At intervals of ten minutes two teaspoonfuls of sulphuric ether were poured over the tumor and strangulated parts. The surrounding skin was protected by vaseline. Slight efforts at reduction were made at first; the tumor gradually diminished beneath the hand on making gentle pressure, and at the end of half an hour had completely disappeared.

—Friedlander, *Wiener Med. Woch.*

TYPHOID FEVER.

1. Typhoid fever occurs more frequently in children than is generally supposed.
2. The fact that ulceration and hemorrhage is much less frequent would explain the absence of pronounced abdominal symptoms.
3. The erratic, undeveloped and hypersensitive nerve centres in early child life explain why the toxic secretions of the Eberth bacillus should make cerebral symptoms very pronounced.
4. Given a child of any age, with or without intestinal disturbance, with a continued elevated temperature, with or without evidence of cerebral disturbance, the possibility of the presence of the Eberth bacillus of typhoid fever should be constantly kept in mind.

—Journal of the American Medical Association.

Current Medical Literature.

ACUTE NEPHRITIS.

Ebstein (Deut. med. Woch., June 10, 1897) discusses acute nephritis occurring as a complication of chronic gastro-enteritis, and relates a case in a woman aged 27. Here there was no other cause for the disease either in past illnesses or in family predisposition. She had suffered from diarrhoea for nine months, and from pain in the gastric region and loss of appetite for six months. She suffered from tapeworm, but as to whether this was the cause of some of these symptoms there was some doubt. The nephritis arose most acutely, and proved fatal in a few days from eclampsia, coma and collapse. During the illness small hemorrhages occurred in the subcutaneous tissue. At the necropsy a tapeworm was found in the intestine. There was a follicular enteritis with ulcers and enlargement of the mesenteric glands. The spleen was quite normal. The kidneys presented the appearances of an acute nephritis. The other organs were healthy. It was only on the third day after admission that a small quantity of albumen appeared in the urine. Later abundant casts were found. The asthmatic attacks present were uremic in character. As regards any other possible cause for the nephritis, except the gastro-enteritis, it must be mentioned that there was no ground whatever for thinking that the patient had influenza. There were no symptoms of an acute infective illness; there was no fever and no splenic enlargement. The author is of the opinion that the suddenly oncoming nephritis was due to an intoxication from

the alimentary canal. The severity of the nephritis arising in cholera is well known. In acute intestinal catarrh renal symptoms may appear, but in cases of chronic catarrh the condition of the urine has not been carefully observed. In this case the stools were very light, but contained no fat. The author records this case to draw attention to the possible occurrence of acute nephritis as a complication of chronic gastro-intestinal catarrh.

SWELLING OF THE PAROTIDS IN UREMIA.

Richardiere (Journal de Med., March 10, 1897) describes this condition, which has not attracted very much attention. Swelling of the parotids is well known in certain intoxications, such as mercury, arsenic, etc., and in uremia, which may be looked upon as a typical intoxication, it is also observed. The author relates a case of uremic poisoning with dyspnea and cephalgia, in the course of which there was pain at the angle of the jaw, accompanied by swelling of the parotid region. Both parotids were attacked at the same time. The swelling lasted four to five days and then completely disappeared. These parotid complications in uremia may be due to two causes—greatly increased secretion or chemical modifications thereof. Increased secretion is a frequent occurrence of uremia, and a large number of cases of ptyalism are recorded, and in a case observed by Barie 900 g. of saliva were secreted in 24 hours. In

the author's case there were no increased parotid secretions nor ptyalism, and in this instance, therefore, the parotid lesion would seem to be due to chemical alteration in the saliva. It is known also that in cases of deficient renal action the saliva contains a large amount of urea, and the parotid would therefore seem to have a certain vicarious action in some cases of renal disease.

THE CAUSATION OF THE PRE-SYSTOLIC MURMUR.

Brockbank (*Med. Chron.*, June, 1897) discusses at length the cause and rhythm of the cardiac murmur ordinarily styled presystolic, but which he prefers to define as a crescendo bruit rapidly ascending in pitch, and terminating abruptly with the closure of the mitral valve. He states that two theories of its origin have been put forward. The first was originally suggested by Fauvel in 1843, and holds that the murmur results from the forcing of blood through a stenosed mitral orifice by a hypertrophied left auricle, aided by the aspirating force of the ventricle in diastole. The second, devised by Ormrod in 1864, is that the murmur is produced by blood regurgitating through the stiff rim of the valve orifice before sufficient force is generated in the ventricle to close the valve. The most recent supporter of the first theory is Sansom, of the second Dickinson. The author propounds a third explanation, namely, that the murmur is caused by blood rushing through a gradually but rapidly diminishing stiff-rimmed, narrowed, mitral valve under a progressively increasing pressure. He illustrates this by the effect of compressing with one's teeth or lips an india-rubber tube through which one is blowing. He agrees with Dickinson's view that the accentuated first sound is due to the hard edges of the stenosed valve being forced together by the pressure of ventricular systole. The author claims to be able to differentiate the abrupt wooden quality of this sound from the more ringing accentuated sound produced by the systole of the right ventricle, and often associated with

the other. Admitting that the "presystolic" bruit is produced by blood rushing through a closing orifice, he next takes up the question whether the closure is the result of auricular or of ventricular action. Even in health he believes it to be due not only to the pressure of the blood, but also to a preliminary contraction of the extreme apex of the ventricle, which he describes as preceding the general systole of that chamber. When the mitral valve is thickened a greater force is required to close it; and Brockbank regards it as more probable that this should be provided by the ventricle than by the hypertrophied auricle. If the force is ventricular in origin he considers that some blood will regurgitate through the stiff orifice before the intraventricular blood pressure is raised high enough to overcome the resistance of the diseased valve. He hence concludes that the murmur ordinarily known as presystolic is really early systolic, and is due to regurgitation through a stenosed mitral orifice in the early stages of ventricular systole.

OBESEITY AND GIGANTISM IN A CHILD OF FOUR.

Capitan and Croizier (*Campt. Rend. Hebd. Soc. de Biologie*, April 2, 1897) record the case of a boy aged 4 years and 4 months who measured 108 cm. (instead of 92 cm.) in height, and weighed 51 kilogrammes (instead of the normal 14 kilogrammes). He was in other respects quite normal, showed no signs of myxedema, and had no arthritic heredity. Before his birth his mother had had a child that died in a few months from congenital weakness. At his birth he weighed 10 pounds, in four months 18 pounds and during a year he increased in weight at the rate of four pounds a month. Latterly he has gained two pounds a month. The authors regarded it as an instance of gigantism with precocious obesity.

SYPHILIS INSONTIUM.

Lesser (*Berl. klin. Woch.*, July 12, 1897) divides unmerited syphilis into (1) congenital syphilis, (2) syphilis

contracted in legitimate sexual intercourse, and (3) syphilis contracted by direct or indirect contact with the syphilis virus exclusive of sexual intercourse. It is the last-named group which Lesser chiefly describes here. Of course every extra-genital chancre must not be placed in this group. The author maintains that in a large number of cases of syphilis apparently contracted in shaving, a wound has been subsequently inoculated by kissing. The last group of unmerited syphilis may be divided into that conveyed (1) by direct personal contact, (2) by indirect means, and (3) by and to medical men in their professional work. In the first group are included cases in which syphilis is conveyed from one child to another or from a child to an adult. Here kissing is the most important cause, but syphilis due to sucking also falls under this heading. Many objects may be the means of indirectly conveying syphilis, such as those used for eating and drinking purposes. On the tonsil it is not necessary to have a breach of surface for the infection to take place. In the third sub-group the medical man may be the means of conveying the disease, as in various operations, as by inoculation and injection, by catheterization of the Eustachian tube, by the use of caustics, etc. Medical men or nurses may contract the disease themselves as in syphilis technica. There are other cases in which the cause of the infection cannot be ascertained. The diagnosis in unmerited syphilis may be very difficult; in the author's opinion the extragenital primary lesion is in the majority of cases overlooked. Again, the non-recognition of the disease may lead to its further transference. Patients with ordinary syphilis mostly know the disease and are more or less careful not to convey it to others. Of course the disease is originally derived from an ordinary case, but unmerited syphilis may under conditions lose the character of a disease of the generative organs. Notwithstanding that the number of cases of syphilis contracted in the ordinary way far exceed those of unmerited syphilis, yet something can be accomplished in prophylaxis by

speedy diagnosis and treatment, and especially by preventing the further spread of unmerited syphilis.

THE NEW TUBERCULIN.

Professor Juan L. Hohr, of Cadiz, (*Anales Medicos Gaditanos*, July 15) reports four cases treated with Koch's new tuberculin. 1. Boy aged 7 years suffering from Pott's disease and tuberculous osteitis of the femur. There was a fistula with scanty discharge, with pain in the limb so severe as to prevent sleep, and great weakness. On April 21 one c.cm. of the 1-500 solution, and on the 23d two c.cm., were injected. The immediate result was increase of suppuration and cessation of the pain. Further injections were followed by rise of temperature, sleeplessness and loss of appetite, and they were discontinued for two or three weeks. The treatment was then resumed, but the febrile symptoms produced were so marked and showed such persistence that it was again abandoned. The sole benefit observed in this case was the total cessation of pain. 2. A man aged 23 with pulmonary tuberculosis at both apices. Injections of the 1-500 solution caused increase of cough and diminution of appetite; the febrile reaction caused by the tuberculin continued for some days after the injection. 3. A man aged 31 with tuberculous adenitis of the cervical glands and ulcers on the neck and shoulders; no chest symptoms. Injections of one and two c.cm. of the 1-500 solution were followed by the development of sharp catarrh with abundant discharge and cough. The effect of the tuberculin on the diseased parts in the neck was to set up inflammation in the scars of old ulcers, which quickly broke down, exposing caseous material which was eliminated in a few days. But new points of ulceration appeared in the neck, and at the same time chest symptoms developed to such an extent that it appeared that the disease had been kindled in several foci. On the injections being discontinued the patient regained his strength, and the ulcers healed under surgical treatment. 4. A woman

aged 36 suffering from superficial lupus of the nose and upper lip, which were the seat of scars; the disease was of eight years' standing. There was a fresh patch on the chin and another along the jaw. Injections (one and two c.cm.) of the 1-500 solution caused disappearance of the redness around the patches, but the patient complained of great weakness and pain in the limbs and of

feeling "ill all over." The treatment was therefore discontinued. The author's experience leads him to conclude that the new tuberculin, even in the highest degree of dilution, always causes reaction, though the intensity may vary. Koch's statements cannot, he thinks, be reconciled with clinical facts, and he considers the new tuberculin "impossible" as a therapeutic agent.

Current Surgical literature.

T. H. MANLEY, M. D., New York, Editor.

ON THE IMMEDIATE REDUCTION OF THE ANGULAR DEFORMITY OF SPINAL CARIOS.

By Robert Jones, F. R. C. S. E., and A. H. Tubby, M. S. Lond., F. R. C. S. Eng.

Our attention having been drawn to this matter by an account of some cases of angular deformity of the spine arising from caries, which had been treated by immediate reduction by Calot, of Berek-sur-Mer, and Redard, of Paris, we deemed it expedient to satisfy ourselves as to its feasibility and safety.

We must confess that we regarded the accounts received from France in a somewhat sceptical spirit, being considerably embarrassed and influenced by the authoritative statements contained in textbooks, that the only safe way of treating carious disease of the spine is by a long course of rest, every effort, of course, being made to prevent deformity in the early stages by complete recumbency, and in the later stages by suitable supports. But that when deformity follows, as it very frequently does in spite of all the precautions, it must be accepted as a lamentable but unavoidable sequence of the disease.

Then, again, to us it seemed probable that the immediate result of forcible rectification might be paralysis, or at least paresis, temporary or

long continued; and arguing on the analogy of what has sometimes occurred after reposition of limbs subsequently to tuberculous arthritis, we felt it was possible that so novel a proceeding in the spine might be followed either by suppuration or by an acute dissemination of tubercle. But when we come to reflect on our experience in dealing with a large number of these articular cases, we could not altogether recall more than three or four cases in which it could be distinctly affirmed that forcible rectification and acute dissemination of tubercle stood in the relationship of cause and effect. Nor has our combined experience been small.

With the statements, therefore, of the French surgeons Calot and Redard before us, and duly considering the various possibilities, we decided to put the question to a cautious trial. After personal observation of the methods adopted in the clinics abroad, and noting the details, we commenced to operate. During the last two months we have together treated eleven cases of angular deformity. In six of them we obtained immediate and complete reduction. In two of these cases, which were extremely deformed, the reduction was very remarkable on account of the facility with which it was effected. In five of the eleven cases we obtained partial reduction, and of these latter cases in three of them the an-

gle was sharp, and the area of disease limited to two or three vertebrae. In the remaining two it was prominent, but obtuse, and extended over six or seven vertebrae, and was accompanied by much thickening of the tissues at the site of disease.

Among the five cases of partial reduction were the two on which we first tried this method, and we felt it to be unwise to use such force at the first sitting as we now know to be necessary to completely reduce the deformity. The remaining three cases of partial reduction were so consolidated as to resist a large amount of force. But we can say that in all five, although the deformity was not entirely reduced, there was considerable lessening of the projection, we should say about three-fourths; and what is very much to the point there was an increase in the length of the spinal column from an inch upwards. This lengthening was not due to mere extensibility of the normal portion of the spine, a source of fallacy we took care to guard against in our measurements, but to the unfolding of the spine at the site of former disease.

Our method follows that of Calot, and in view of the difficulty of sometimes obtaining a sufficient number of assistants we have devised a special apparatus, by which traction is simultaneously made upon the head, arms and legs. After steady extension of the spine, either by the aid of assistants or by the apparatus, for a few minutes, with the patient in the prone position, care being taken that the pull should be equal in all directions, downward pressure is made by the surgeon's hands upon the projections, counter-pressure being afforded by the open palms of an assistant placed on the abdomen. It is advisable to have the patient's bowels well emptied before the operation, and then the assistant's hands readily support the anterior aspect of the spine, and so prevent too rapid reduction of the deformity. When the projection is dorsal, counter-pressure can be indirectly made through the chest walls. The patient is kept under an anesthetic from the first, and as this must

be administered while he or she is in the prone position, it is a little difficult. But we have found that it is better to get the patient well under before proceeding to operate, and then but little more is required after the prone position is assumed.

Reduction, partial or complete, having been obtained, a plaster of paris corset is put on, and is carried up over the head and neck, merely leaving the face exposed, care being taken that pressure is maintained during the application of the jacket on the site of deformity. It is well to note that a very important point in the adjustment of the plaster of paris corset is that the spine must be maintained in hyper-extension. We have found it easier to put the bandages on the head and neck if the patient is suspended from a Sayre's apparatus.

Now as to results. In not one of the cases, despite the complete or partial reduction of the deformity, has there been either paresis or paralysis following the operation, nor has there been in four cases which have been carefully watched for two months any untoward signs, either of suppuration or a renewed outbreak of tubercle in those cases in which we presumed it to be the fons et origo mali. And our experiences accord with those of Calot, who has gone a step further and excised some of the projected laminae. We should mention that in some cases we have used a modification of the double Thomas' hip-splint, with a head-rest and leg-support, so constructed as to keep the spine in extension.

We submit, then, that, although the method is still on its trial as to its ultimate results, it seems to afford a good prospect of reducing the deformity without incurring dangerous consequences. This article should, however, be regarded as a preliminary statement. We hope to publish a more detailed account of the cases in a few months' time. At any rate, the lesson which has been brought home to us is that the correct way of preventing deformity from arising or increasing in Pott's disease is to maintain the spine in hyper-extension by suitable support.

beneath it, and not simply to place the patient upon a bed or straight splint, which favors rugging of the spine at the site of disease and increase of intervertebral pressure.

In conclusion, once we can be fully assured that no symptoms of a serious character follow these manipulations, it becomes an easy matter when the spine is rectified to maintain it in the corrected position.

—The British Medical Journal, Aug. 7, 1897.

NOTE.

The above entire article we copy, as it strikes us as most extraordinary in many particulars. How, indeed, we apply principles to the vertebral columns ruled out, in the extremities, strikes one as rather remarkable. In fact, violent forcible rectification of a joint in an extremity distorted by tuberculosis, breaking down of the osseous and ligamentous structures, is everything but rational or safe surgery.

However, these are days of wonders, and possibly, though the spine be a highly specialized organ, it may turn out that it will bear, with impunity, such force as would be destructive to an extremity.

In an extensive series of experiments of the spines of animals, made by us, it was curious to note that in many instances they were fractured and refractured, in some few hemorrhage following into the abdominal and pleural cavities, yet no symptoms of paralysis followed and recovery was prompt. T. H. M.

PATHOGENY OF RELAPSING APPENDICITIS.

Mdlle. Von Mayer (Rev. Med. de la Suisse Rom, April 20, 1897) finds that none of the older theories as to the cause of relapsing appendicitis, such as its being due to tuberculous, dysenteric or typhoid ulcers, are borne out by statistics. Roux, in 1895, was the first to bring forward the theory that micro-organisms find a suitable nidus in which to remain latent in the adenoid structures of the appendix and in residual cicatrices and adhesions. The author

has endeavored to prove this theory, and has examined 40 appendices directly after removal during life. 1. Bacteriology of the secretions from the lumen, perforations, empyemata and extra-appendicular abscesses. Plate cultures from these remained sterile in more than half the cases (25). The non-sterile cases produced very diverse organisms, various bacilli and diplococci. 2. Bacteriology of sections. Micro-organisms were found localized in the thickened serosa, in the lymphatic spaces of all the layers of the appendix, and even in the non-ulcerated mucosa, in adhesions, etc., in 51 per cent. of the cases (23 times). These latent organisms were present, not only in appendices removed in the quiescent stage six to eight weeks after an attack, but sometimes in those removed eight months after. On the other hand, cases where no bacteria were present in the tissues (17 cases) included some of those removed only three to six months after, or even during an attack. Either the bacteria had perished or more probably were absent from the special portions of tissue examined. An acute outbreak always starts in the remains of inflammation; cicatricial foci being more easily penetrated by micro-organisms than healthy tissues. As regards the kind of organism present in the tissues, the *B. coli* was found in two cases, *B. coli* with other organisms in one, and the tubercle bacillus in one. In the remaining 19 cases the bacillus described by Tavel and Lanz in their work on the etiology of peritonitis was present, either alone or with the *coccus conglomeratus*. The author concludes: 1. The principal causes of relapses are micro-organisms, which are latent in the thickened walls of the appendix, in fibrous strictures of it, and in peri-appendicular adhesions. 2. After one attack the whole appendix remains a locus resistentiae minoris, even if there has been an apparently complete restitutio ad integrum. There is left either a stricture, a cicatrix, adhesions, or an incomplete restoration of the mucosa, together with constant fatty degeneration of all its tissues, which, infected during the

first attack, remain infected, as proved by microscopical examinations. 3. These alterations in structure are accompanied constantly by a new formation and dilatation of vessels, which favor active and passive congestion from slight causes, whereby the tissues lose their power of resistance, and, the latent organisms again becoming pathogenic, a relapse occurs. 4. The organisms found in the secretions generally differ from those in the tissues. This possibly points to symbiosis and a mixed infection during the acute relapse in many cases.

SILK OR CATGUT IN ABDOMINAL SECTION?

Reclus (*Gazette des Hopitaux*, July 10, 1897) insists that catgut is better for ligatures than silk, especially in total hysterectomy, where they are left hanging out into the vagina. Silk remains in place indefinitely, and is very liable to become infected. Reclus reports that in the West of France a woman who had undergone hysterectomy fifteen months previously, he himself being the operator, suffers still from suppuration due to a silk thread, with which her doctor says has kept up a trifling but intractable suppuration. On that account Reclus has discarded silk.

THE RADICAL CURE OF HERNIA BY ZINC CHLORIDE INJECTIONS.

Demars (*Sem. Med.*, May 8, 1897) showed six cases of hernia before the Academie des Sciences in support of Lannelongue's method of injecting chloride of zinc (*vide Epitome*, vol. i, 1897, par. 281), three of which were boys aged from 5 to 7 years and three girls aged 6 to 15. In one girl and one boy the hernia was congenital. All the herniae were cured. In the girl of 15, some months after the cure of a congenital, a direct inguinal hernia appeared. The original operation consisted in three injections of 12 to 15 drops

of a 10 per cent. zinc chloride solution into the external pillar of the ring and three internally towards the pubes. This case proves the value of the method, since the original weak spot did not give way. It also shows that Malgaigne's theory that a special predisposition of the abdominal walls is present in cases of hernia is correct. The edema of the scrotum and testicles following the injections appears to be of no importance. At the same meeting Lannelongue stated that on April 14, 1897, he had seen all the five cases of inguinal hernia treated by his sclerogenic method, shown before the Academy of Medicine in July, 1896. In all the cure remained complete, and their condition was better than any open operation could obtain. Comparing the open with his operation everything was in favor of the latter, as regards final result, danger of the operation and the ease and quickness with which it could be performed.

TERATOMA OF THE NECK SIMULATING CYSTIC BRONCHOCLE.

Swoboda (*Wein. klin. Woch.*, November 12, 1896) records the case of a child which was born with a tumor of the left side of the neck reaching from the lobe of the ear to the clavicle, and from the middle line in front to the sternomastoid, and rendering the circumference of the neck nearly half as large again as the normal. The tumor was hard and elastic, but in one or two places fluctuation could be felt in it. Respiration and swallowing were not obstructed, but after long-continued crying some respiratory stridor could be detected. The swelling grew rapidly, but the child, though feeding greedily, remained very thin and dyspeptic; attacks of severe dyspnea came on after prolonged crying or sucking. Fearing the effects of injection or puncture, Swoboda removed the growth, the patient being at the time eleven weeks old. During the operation the child became asphyxiated, and was restored

only by artificial respiration, subsequently became aphonic, but this passed off in about ten days; the probable cause of these symptoms was crushing of the right recurrent laryngeal nerve by a pair of pressure forceps; otherwise recovery was rapid, and the patient had gained one-twelfth in weight fifty days after the operation. The central fluctuating part of the tumor burst during removal, allowing a puriform fluid to escape; no micro-organisms could, however, be detected either in this or in any portion of the growth. The microscopical structure of the latter was most extraordinary; it consisted mainly of neuralgia, with glia cells and ganglion cells, the whole being traversed by bands of connective tissue. It must, therefore, be classified under the teratomata as a ganglionic glioma, a growth which has never before been observed outside the central nervous system. In some parts there was leucocytic and fatty degeneration, and near one edge thyroid tissue was observed; this, however, did not belong to the tumor proper, but had become imprisoned in it in the course of growth. It should be added that the histological investigation was made by Weichselbaum.

THE ETIOLOGY OF TUMORS OF THE KIDNEY.

Ricker (*Centralbl. f. allgem. Pathologie*, June 1, 1897) has devoted two years to the study of this subject, which has received so great an impetus since the discovery of the suprarenal origin of so many kidney growths. In certain cases in which there was an abnormal nearness of the suprarenal body to the kidney he found renal tumors in the suprarenal tumors in the kidney. No satisfactory explanation is as yet forthcoming of the simple cysts found attached to the capsules of perfectly normal kidneys—for example, in children—but it is possible that some

of them may be traced to suprarenal rudiments. Of the non-malignant tumors he mentions first the tubular adenoma, which appears as a cortical growth apparently arising from the tubules of the medulla, or rather from their "rests." The next group which he considers is the trabecular cystoma, of which he traces the evolution in a continuous series, from the simple kidney cyst with club-shaped epithelium. In this develop trabeculae, first simply of connective tissue, but later containing capillaries. These tumors thus arise in and from normal kidneys; a small proportion may, however, develop as the result of obstruction of the ducts from senile change. There is also a third variety of kidney tumor, which differs from the last in the following respects: It is sub-capsular and of variable size, but rare and solitary, whereas the cystoma is common and often multiple. It is solid in structure and often shows early degeneration, cavities, the cystoma being truly cystic with trabeculae composed at first of connective tissue and capillaries, later of capillaries alone. It is composed of rows of cells, which point freely with capillaries, from which, however, they are separated by thin connective tissue. The cells are polygonal, and generally, but not invariably, fat; then tend to the formation of giant cells. In the trabecular cystoma the cells form a single layer of highly cylindrical epithelium, and invariably contain fat. This last group of kidney tumor Ricker considers to be indubitably suprarenal in origin. He adduces in favor of this view the apparently capillary origin and the great resemblance which the tumors have to the suprarenal body. Although the origin of the trabecular cystoma appears to be purely renal, yet he considers that it has affinities, on the one hand, with the suprarenal tumors—as shown by the fat which it contains—and on the other hand, the perivascular sarcomata.

Current Literature in Obstetrics and Gynecology.

PREGNANCY AND FIBROIDS.

Keiffer (Sem. Med., May 7, 1897) discussed before the Obstetrical Society of France the special indications for the treatment of pregnancy and parturition when complicated by fibrous tumors of the uterus. In pregnancy there are risks of miscarriage, of hemorrhage, of premature birth, of abnormal presentations, of placenta previa, of dystocia through excessive development of the tumor, of various degenerations, of dangerous compression of the pelvic or abdominal organs, of ascites, etc. The premature death of the fetus forms in conjunction with these accidents an additional source of danger. On the other hand the tumor may follow the physiological modifications of normal uterine tissue, and act like the latter in all respects; in such a case curetting of the uterus after miscarriage is possible. Should the pregnancy reach its normal termination hemorrhage may be met in the ordinary way, podalic version can be performed or instrumental delivery effected as best suited to the case, or the tumor causing the dystocia may be removed either by laparotomy or per vaginam. Extirpation of the whole organ may be possible in the worst cases. Whatever may be the percentage of accidents in such cases, it is enough to show that the woman can be delivered, and may give birth to a living child, to make it easy to refuse hysterectomy. Mere curetting seems to be enough to deprive fibromata complicating pregnancy of most of their

dangers. The method of treating severe hemorrhage by hypodermic and intravenous injections of artificial serum has also contributed largely to this result. Curetting has not only a beneficial action on the tendency to hemorrhage, but protects the uterus against saprophytic or microbial infections, to which the presence of an imperfectly vascularized neoplasm renders it more prone. As regards general treatment, the diet should be regulated, rest enjoined, and hydrastinine and kindred substances should be administered. In advanced pregnancy the amount of obstruction by the tumor will determine the procedure necessary for safe delivery. During labor abnormal presentation or the presence of dystocia will indicate whether version should be performed; in the latter condition version is the most advantageous mode of extraction. Removal of the fibroma is advisable when it in itself constitutes the main obstacle to delivery, and when it is subperitoneal, pedunculated, or easy of access. Either variety of pelvotomy is indicated when the tumor is in the lower uterine segment, and the diameter of the bony pelvis so reduced thereby that the alternative is a Cesarian section. Total extirpation of the uterus and appendages is indicated (1) when the tumor independently of the pregnancy calls for operation; (2) when pregnancy is arrested and delivery impossible; (3) when there is suppuration following retained placenta; (4) after Cesarean section necessitated by fibrous tumors.

TUBERCULOSIS OF THE OVARY.

Orthmann (Centralb. f. Gynak, No. 22, 1897) endeavors to make this subject fairly clear from a clinical point of view. He has collected 177 cases. Only 57 were carefully submitted to microscopic research; of these 48 seemed to be instances of pure ovarian tuberculosis, bilateral in more than half (27) the cases. The remaining nine were tuberculous ovarian cysts. In spite of theories of infection from the outer entrance of the genital tract, and notwithstanding the tendency of pathologists to make out primary disease where it has not been detected before. Orthmann declares that primary tuberculosis of the ovary has never been satisfactorily distinguished in woman, though Acconci and Schottlander have experimentally produced it in animals. In the 48 cases above noted as pure tubercle of a previously sound ovary, infection was traced from the Fallopian tube in 26, and from the peritoneum in 22. The disease may appear as tuberculous periophoritis, disseminated or diffused, and as miliary tubercle of the substance of the ovary (20 out of 48 cases), cheesy tubercle or tuberculous abscess. The two latter are about equally common. The former, much more frequent, may pass undetected by the naked eye, but the disease shows its features very characteristically under the microscope. In the 48 cases, tubercle bacilli were detected nine times by the microscope and four times by experiments on animals. Orthmann describes four new cases under his own care. In one there was distinct tuberculosis of the yellow substance in a corpus luteum.

VERATRUM VIRIDE IN PUERPERAL CONVULSIONS.

W. H. Thayer (Boston Med. and Surg. Journ., April 1, 1897) speaks highly of veratrum viride both in puerperal convulsions and in the convulsions of children. He gives it in full doses—one drachm of the tincture. It was first used in this way by Fearn, of Brooklyn, in 1869, and has since been steadily, if slowly, gaining favor. It reduces the high rate of the pulse to 60 or under without any depression, for the strength of the beat is maintained.

RETENTION OF URINE AND PREGNANCY AT THE FIFTH MONTH.

Lugeol (Journ. de Med. de Bordeaux, April 4, 1897) has met with a case of retention of urine at the fifth month of pregnancy, in which the usual causes (displacements of the uterus or malformations) were absent. The patient was a widow 34 years of age who had remarried six months previously, and was pregnant for the first time. She had the usual signs of pregnancy, but the abdomen was larger than it ought to have been for the term arrived at. A spherical tumor was felt in the middle line reaching as high up as the epigastrium. No fetal heart was heard. The woman stated that she passed urine in large quantity, and that it even came away involuntarily. Four litres of dark-colored ammoniacal urine were drawn off with the catheter, and the abdominal tumor had disappeared, a five months' pregnant uterus taking its place. The fetal heart could now be easily heard. Lugeol adduces as a possible cause the habit which the patient had some time ago acquired of retaining her urine for long periods in order to suit her work.





LESIONS PRODUCED BY THYROID EXTRACT.

H. J. Berkley (Bulletin of the Johns Hopkins Hospital, July, 1897) has investigated the various lesions induced by the action of thyroid extract on the cortical nerve cells. Taking into consideration the very grave symptoms of a toxemic nature observed in so many cases of thyroid administration, more particularly those involving cerebral and vaso-motor functions, the author undertook a series of observations with the view of ascertaining the nature of the lesions. The first portion of the investigation was made upon patients in an insane asylum. In each case a pill containing five gr. of fresh sheep's gland was administered daily, which was subsequently increased to two or three, depending upon the results. There was loss of weight, tachycardia and enfeeblement of the cardiac action in each instance, with increase of cutaneous transpiration, irritability and more or less mental and motor excitement. This occurred in all cases, no matter how depressed or demented the patients had been previous to the administration. One patient died before the excitement had subsided, with evidence of acute tuberculosis, and the others showed an edematous condition of the integument of the forehead and cheeks similar to that observed in myxedema. All showed more or less restlessness, with both mental and motor excitement, and in some instances there was considerable mental improvement, though not in all. In view, therefore, of the effect on the mental condition of the same patients, it was decided to administer thyroid to animals in order to examine their nerve tissues. Five mice and three guinea-pigs were treated with thyroid extract. In the

case of the mice there was swelling of the face, some emaciation and loss of strength. In the guinea-pigs the general symptoms were similar, and in all cases the administration was continued till the animal died. Microscopic examination of the cerebrum was made in all cases, both with the silver phosphomolybdate and other staining methods; no lesion was found of either nerve elements or neuroglia; there was no varicose or atrophied dendrites or loss of gemmulae. The corpora showed no loss of angularity, and the axons and appendages were all healthy. No nuclear change in the cells could be ascertained, and the blood vessels were carefully examined without the discovery of any lesion. It would seem from these investigations, so far as they go, that the toxic action of thyroid is of a different nature from that of other conditions, and one which we are not, therefore, in a position to understand.

INJECTIONS OF ARTIFICIAL SERUM AS A MEANS OF PREVENTING DEATH IN BURNS.

Tommasoli (Rif. Med., July 5) recalls the fact that he sent to the Dermatological Congress, held in London in 1896, a note giving an account of trials made by him, during a period of three years with artificial serum as a means of treatment in certain skin affections, which he believes to be due to chronic infective intoxication or autointoxication. In some cases—two of diffuse chronic eczema, one of scattered folliculitis, one of senile pruritus—a cure had been effected; a case of lichen planus, in which itching was very marked, was cured in thirty-six days.

Since then the same treatment has been successful in cases of psoriasis and various pruriginous affections. Tommasoli now reports the results of the same method of treatment in two cases of very extensive burns. In one the patient was a woman aged 60, who was burned severely over two-thirds of the front of the body, face and limbs. Diarrhoea and delirium had set in, and death seemed to be imminent, when Tommasoli determined to try the effect of injections of ordinary artificial serum composed of chloride of sodium and bicarbonate of sodium. The patient, who was burned on December 2, came under his care on December 4. On December 10 a first injection of 300 g. of serum was given. The next day one litre was injected in two doses. On December 12 a litre was injected in one dose, the patient being kept meanwhile in a bath. On December 13 another litre was injected. On December 14 the patient died. The effect of the injections had, however, been distinctly good, the patient passing some hours of freedom from pain after each one. Encouraged by this result Tommasoli adopted the same method in the case of a man aged 20, who was severely burned all over the right side of the front of the chest, the axilla and the arm, as well as over the whole of the back from the shoulders to the buttocks and over all the right buttock. He was admitted on March 12, and on the 13th an injection of 250 g. of serum was given. One of 300 g. was given on the 14th, one of 400 g. on the 15th. On the 16th the wounds were dressed with iodoform, but this had to be discontinued in a few days on account of its toxic effects. On the 17th an injection of 400 g. was given, and on the 18th and every subsequent day till April 6 one of 500 g. From the first the patient, though prostrated by pain, held his own; then he improved rapidly, and on May 3, when he insisted on leaving the hospital, his general condition was excellent, and the wounds had a healthy appearance. Experiments on rabbits and dogs showed that injections of artificial serum have a very distinct effect in preserving life after severe burns.

PICRIC ACID IN ECZEMA.

Gaucher (Sem. Med., May 26, 1897) has had very good results in acute vesicular eczema using picric acid. He applies a one per cent. solution every other day, and covers the surface with cotton wool soaked in this solution. The dressing is kept in place for two days. The acute inflammation subsides rapidly, and itching is relieved. This treatment would probably be useful in other acute skin diseases such as pemphigus, but is useless in chronic eczema.

MARAGLIANO'S SERUM IN CERVICAL ADENTITIS ASSOCIATED WITH PHLYCTENULAR OPHTHALMIA.

Beccaria Francesce (Rif. Med., June 28, 1897) in a paper read before the Medical Society of Turin, reports good results obtained by him by this treatment. The patients had no pulmonary lesions and were apyretic, but the strumous and lymphatic constitution was well marked. The best results were obtained when the injections were given every five or six days. The body weight increased under treatment. No rise of temperature ever occurred. In a very few cases the intramuscular injections gave rise to erythema. The subconjunctival injections were not painful, were rapidly absorbed and gave rise to no irritation. The phlyctenule disappeared in four or five days, two injections being sufficient as a rule. Fresh phlyctenulae or pustules rarely reappeared.

CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING AUGUST 21, 1897.

August 14—Assistant Surgeon F. L. Pleadwell, detached from the Texas August 17 and ordered to the Nashville, August 19.

Assistant Surgeon W. M. Wheeler, detached from the Oregon August 23 and ordered to the Mare Island Navy Yard for duty in connection with the Marietta.

August 20—Assistant Surgeon D. H. Morgan, detached from the Monongahela and ordered to the Cincinnati.

Miscellany.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION'S PRELIMINARY PROGRAMME.

The following papers will be read at the next annual meeting of the American Electro-Therapeutic Association, at Harrisburg, Pa., September 21, 22 and 23, 1897:

1. Caleb Brown, M. D., Sac City, Iowa—"Electricity as an Aid in the Treatment of Goitre."
2. George E. Bill, M. D., Harrisburg, Pa.—Title to be announced later.
3. Francis B. Bishop, M. D., Washington, D. C.—"Chorea."
4. Lucy Hall Brown, M. D., Brooklyn, N. Y.—"A New Electrode for Use With Static Machine."
5. Eugene R. Corson, M. D., Savannah, Ga.—"Some Thoughts and Suggestions on X-Ray Work."
- 6 Margaret A. Cleaves, M. D., New York.—"Expenditure of Electrical Energy." (Paper announced at the last meeting, but not as yet read or printed.)
7. Professor A. E. Dolbear, Tuft's College, Boston, Mass.—"Molecular Effects of Electricity."
8. William J. Herdman, M. D., Ann Arbor, Mich.—"The Influence of Magnetic Fields on Nutrition."
9. J. H. Kellogg, M. D., Battle Creek, Mich.—Electricity as a Means of Involuntary Exercise."
10. Charles H. Loder, M. D., Chicago, Ill. "The Treatment of Urethral Hyperesthesia in the Male."
11. Robert S. Newton, M. D., New York—"What Has Electricity Accomplished in the Treatment of Mental Diseases?"
12. Robert Newman, M. D., New York—"Electric Treatment in Gout and Uric Acid Diathesis."
13. R. J. Nunn, M. D., Savannah, Ga.—"Sources of Atmospheric Elec-

tricity."

14. Curran Pope, Louisville, Ky.—"The Electro-Therapeutics of Neuralgia."

15. F. H. Wallace, M. D., Boston, Mass.—"Ozone in Nasal Catarrh and Pulmonary Diseases."

16. W. S. Watson, M. D., Fishkill-on-Hudson.—"Medical Electricity."

17 L. A. Weigel, M. D., Rochester, N. Y.—"Electricity in Orthopedic Practice."

18. G. B. Massey, M. D., Philadelphia, Pa.—"The New Electro-Mercuric Treatment of Cancer."

19. J. Bergonie, M. D., Bordeaux, France.—

a—"A New Electrode, Preventing the Diffusion of the Current."

b—"Palliative Electric Treatment of Tic Douloureux of the Face."

c—"The Action of the Roentgen Rays on the Vitality and Virulence of Koch's Bacilli in Cultures."

There is a good prospect of having a fine exhibit of electrical apparatuses and also several social entertainments and receptions.

Arrangements have been made with the Commonwealth Hotel, which will form the headquarters of the officers of the association; the Lochiel Hotel and the Bolton Hotel, Harrisburg, Pa.

CORRECTION.

In the prescription on page 138 of last issue in the article by Dr. Nefé a typographical error made "oz." out of "dr." It should read as follows:

R—Fl. ext. hydrast can.
Ol. terebinth.....	aa. dr. ii
Spts. vini gallici.	
Aquaee	aa. fl. oz. ii
M. Sig.—One teaspoonful every hour,	
	alternating with No. 1.